

January 29, 2003

Re: Jay County Landfill, Inc. 075-16124-00029

TO: Interested Parties / Applicant

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosure

FNPER.wpd 8/21/02



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

January 29, 2003

Mr. Jim Davis
Jay County Landfill, Inc.
P.O. Box 1264
Portland, Indiana 47371

Re: 075-16124-00029
First Significant Source Modification to:
Part 70 permit No.: T075-12836-00029

Dear Mr. Davis:

Jay County Landfill, Inc. was issued Part 70 operating permit T075-12836-00029 on March 26, 2002 for a municipal solid waste landfill. An application to modify the source was received on September 17, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) landfill gas recovery plant, consisting of the following:

- (a) Four (4) 1,000 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a landfill gas feeding rate of 295 scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of 20 gallons of engine oil per month and exhausts through a crankcase breather vent.
- (b) The following VOC and HAP storage containers, including storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; and vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids:
 - (1) Two (2) petroleum storage tanks, each with a maximum capacity of 1,000 gallons.
 - (2) Four (4) engine oil day tank, each with a maximum capacity of 20 gallons.
 - (3) One (1) antifreeze storage tank, with a maximum capacity of 550 gallons.
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (d) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:
 - One (1) parts washing station, with a maximum capacity of 20 gallons.
- (e) A laboratory as defined in 326 IAC 2-7-1(20)(C), including a gas chromatograph.
- (f) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

- (g) Cleaners and solvents having a vapor pressure equal to or less than 2 kPa (15mm Hg or 0.3 psi) measured at 38 degrees C (100°F) or having a vapor pressure equal to or less than 0.7 kPa (5mm Hg or 0.1 psi) measured at 20°C (68°F). The use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (h) Paved and unpaved roads and parking lots with public access.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/YC

cc: File - Jay County
Jay County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development -Sara Cloe
Technical Support and Modeling - Michele Boner



Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

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PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Jay County Landfill, Inc.
5825 W. South
Portland, Indiana 47371**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T075-12836-00029	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: March 26, 2002 Expiration Date: March 26, 2007

First Significant Source Modification No.: 075-16124-00029	Pages Affected: 1, 3, 19, 20, 21, 22
Issued by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:



SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a municipal solid waste landfill

Responsible Official:	Vice President of Operations
Source Address:	5825 W. South, Portland, Indiana 47371
Mailing Address:	P.O. Box 1264, Portland, Indiana 47371
SIC Code:	4953
County Location:	Jay
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) municipal solid waste landfill, identified as LF1, constructed in 1970, with a maximum capacity of 3,739,999 tons, and controlled by a utility flare, identified as FL1, with a maximum flow rate of 1500 cubic feet per minute, and exhausting through stack FLS1.
- (b) Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a maximum landfill gas feeding rate of 325 scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of 240 gallons of engine oils per year and exhausts through a crankcase breather vent.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1 (21):

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:

One (1) parts washing station, with a maximum capacity of 20 gallons.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(7)]

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deletedby this permit.
- (b) All previous registrations and permits are superseded by this permit.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), except for as allowed in 40 CFR 60, Subpart WWW or approved variances contained within the Collection and Control System Design Plan required pursuant to this rule, the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance, except as otherwise provided for in 40 CFR 60, Subpart WWW or approved variances contained within the Collection and Control System Design Plan required pursuant to this rule. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) municipal solid waste landfill, identified as LF1, constructed in 1970, with a maximum capacity of 3,739,999 tons, and controlled by a utility flare, identified as FL1, with a maximum flow rate of 1500 cubic feet per minute, and exhausting through stack FLS1.
- (b) Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a maximum landfill gas feeding rate of 325 scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of 240 gallons of engine oils per year and exhausts through a crankcase breather vent.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emissions Standards and Limitations

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart WWW.

D.1.2 Municipal Solid Waste Landfill NSPS [326 IAC 12] [40 CFR 60.752, Subpart WWW]

The municipal solid waste landfill has a design capacity greater than 2.5 million megagrams (Mg) and shall either comply with 40CFR 60.752 (b)(2) or calculate the non methane organic compound (NMOC) emission rate for the landfill using the procedures specified in 40CFR 60.754.

D.1.3 Standards for air emissions from municipal solid waste landfills [40 CFR 60.752]

Pursuant to 40 CFR 60.752(b)(2), If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

- (a) Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year:
 - (1) The collection and control system as described in the plan shall meet the design requirements of 40 CFR 60.752(b)(2)(ii).
 - (2) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the owner or operator.
 - (3) The collection and control system design plan shall either conform with specifications for active collection systems in 40 CFR 60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to 40 CFR 60.759.
 - (4) The Administrator shall review the information submitted under 40 CFR 60.752(b)(2)(i) (A),(B) and (C) and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells,

combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

- (b) Install a collection and control system that captures the gas generated within the landfill as required by 40 CFR 60.752(b)(2)(ii)(A) or (B) and (b)(2)(iii) within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified 40 CFR 60.757(c)(1) or (2).

D.1.4 Operational Standards for Collection and Control Systems [40CFR 60.753]

Pursuant to 40 CFR 60.753, each owner or operator of an MSW landfill with a gas collection and control system used to comply with 40 CFR 60.752 (b)(2)(ii) shall:

- (a) Operate the collection system such that gas is collected from each area, cell, or group of cells in the municipal solid waste landfill in which solid waste has been in place for five years if active or 2 years or more if closed or at final grade.
- (b) Operate the collection system with negative pressure at each wellhead except under the following conditions:
 - (1) Fire or increased well temperature. The Permittee shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in 40 CFR 60.757(f)(1).
 - (2) Use of a geomembrane or synthetic cover. The Permittee shall develop acceptable pressure limits in the design plan.
 - (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the Office of Air Quality (OAQ).
- (c) Operate each interior wellhead in the collection system with a landfill gas temperature less than 55EC and with either a nitrogen level less than 20 percent or an oxygen level less than 5 percent. The Permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
 - (1) The nitrogen level shall be determined using Method 3C, unless an alternative method is established as allowed by 40 CFR 60.752 (b)(2)(i).
 - (2) Unless an alternative test method is established as allowed by 40 CFR 60.752 (b)(2)(i), the oxygen shall be determined by an oxygen meter using Method 3A except that; the span shall be set so that the regulatory limit is between 20 and 50 percent of the span; a data recorder is not required; only two calibration gases are required, a zero and span, and ambient air may be used as the span; a calibration error check is not required; the allowable sample bias, zero drift, and calibration drift are 10 percent.
- (d) Operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the Permittee shall conduct surface testing around the perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The Permittee may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring

design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing.

- (e) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour.
- (f) Operate the control system at all times when the collected gas is routed to the system.
- (g) If monitoring demonstrates that the operational requirements in 40 CFR 60.753(b), (c), or (d) are not met, corrective action shall be taken as specified in 40 CFR 60.755(a)(3) through (5) or 40 CFR 60.755(c). If corrective actions are taken as specified in 40 CFR 60.755, the monitored exceedance is not a violation of the operational requirements in 40 CFR 60.753.

D.1.5 National Emission Standards for Hazardous Air Pollutants for Active Asbestos Waste Disposal Sites [40 CFR 61.154, Subpart M]

This source is subject to the National Emission Standards for Hazardous Air Pollutants 326 IAC 14-2-1, [40 CFR 61.154, Subpart M] because the landfill accepts asbestos-containing waste material. This rule requires that any active waste disposal site that receives asbestos-containing waste material must either:

- (a) Allow no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or comply with (b) or (c) below.
- (b) At the end of each operating day or at least once every 24-hour period, asbestos-containing waste material that has been deposited during the previous 24-hour period must:
 - (1) Be covered with at least 15 centimeters (6 inches) of compacted nonasbestos containing material, or
 - (2) Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the Administrator. Any used, spent, or other waste oil is not considered a dust suppression agent.
- (c) Use an alternate emissions control method that has received prior written approval by the Administrator according to the procedures described in 61.149(c)(2).
- (d) Also, unless a natural barrier deters access by the general public, warning signs and fencing must be installed or the requirements of paragraph (b)(1) above must be met. The perimeter of the disposal site must be fence in a manner adequate to deter access by the general public. The warning signs must:
 - (1) Be posted in such a manner and location that a person can easily read the legend; and

- (2) Conform to the requirements of 51cm x 36 cm upright format signs specified in 29 CFR 1910.145(d)(4) and this paragraph; and
 - (3) Display the information contained in the legend provided in 61.154(b)(1)(iii).
- (e) For all asbestos containing waste material received, the owner or operator of the active waste disposal site shall:
 - (1) Maintain waste shipment records and include the following information
 - (A) The name, address, and telephone number of the waste generator;
 - (B) The name, address, and telephone number of the transporter(s);
 - (C) The quantity of the asbestos containing waste material in cubic meters (cubic yards).
 - (D) The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. Report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site, by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste. Submit a copy of the waste shipment record along with the report.
 - (E) The date of the receipt.
 - (2) As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator.
 - (3) Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the waste generator (identified in the waste shipment record), and if different, the local, State, or EPA Regional office responsible for administering the asbestos NESHAP program for the disposal site. Describe the discrepancy and attempts to reconcile it, and submit a copy of the waste shipment record along with the report.
 - (4) Retain a copy of all records and reports required by this paragraph for at least 2 years.
- (f) Maintain until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area.
- (g) Upon closure, comply with all the provisions of 40 CFR 61.151.
- (h) Submit to the Administrator, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities.

- (i) Furnish upon request, and make available during normal business hours for inspection by the Administrator, all records required under this section.
- (j) Notify the Administrator in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the Administrator at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. Include the following information in the notice:
 - (1) Scheduled starting and completion dates.
 - (2) Reason for disturbing the waste.
 - (3) Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the Administrator may require changes in the emission control procedures to be used.
 - (4) Location of any temporary storage site and the final disposal site.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 60.754] (1)

- (a) Pursuant to 40 CFR 60.754(b):

After installation of a collection and control system in compliance with 40 CFR 60.755, the Permittee shall calculate the non methane organic compound (NMOC) emission rate for purposes of determining when the system can be removed using the following equation:

$$M_{\text{NMOC}} = 1.89 \times 10^{-3} Q_{\text{LFG}} C_{\text{NMOC}}$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year

Q_{LFG} = flow rate of landfill gas, cubic meters per minute

C_{NMOC} = NMOC concentration, parts per million by volume as hexane

- (1) The flow rate of landfill gas, Q_{LFG} , shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of appendix A of 40 CFR 60.
- (2) The average NMOC concentration, C_{NMOC} , shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of appendix A of 40 CFR 60. If using Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The Permittee shall divide the NMOC concentration from Method 25C of appendix A of 40 CFR 60 by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

- (3) The Permittee may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the Office of Air Quality.
- (b) Pursuant to 40 CFR 60.754(d):
- For the performance testing required in 40 CFR 60.752(b)(2)(iii)(B), Method 25 or Method 18 of appendix A of 40 CFR 60 shall be used to determine compliance with 98 weight percent efficiency or the 20 ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the Office of Air Quality (OAQ) as provided by 40 CFR 60.752(b)(2)(i)(B). If using Method 18 of appendix A, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). The following equation shall be used to calculate efficiency:
- $$\text{Control Efficiency} = (\text{NMOC}_{\text{in}} - \text{NMOC}_{\text{out}}) / (\text{NMOC}_{\text{in}})$$
- where,
- NMOC_{in} = mass of NMOC entering the control device
 NMOC_{out} = mass of NMOC exiting control device

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 Monitoring [40 CFR 60.756] Except as provided in 40 CFR 60.752(b)(2)(i)(B)
Except as provided in 40 CFR 60.752(b)(2)(i)(B):

- (a) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(ii)(A) for an active gas collection shall install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead and:
- (1) Measure the gauge pressure in the gas collection header on a monthly basis as provided in 40 CFR 60.755(a)(3);
 - (2) Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in 40 FR 60.755(a)(5); and
 - (3) Monitor temperature of the landfill gas on a monthly basis as provided in 40 CFR 60.755(a)(5).
- (b) The Permittee seeking to comply with 40 FR 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturers specifications, the following equipment, except as otherwise provided for in 40 CFR 60, Subpart WWW or approved variances contained within the Collection and Control System Design Plan required pursuant to this rule:
- (1) A temperature monitoring device equipped with a continuous recorder and having minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius of $\pm 0.5^{\circ}\text{C}$, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.
 - (2) A device that records flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a

lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

- (c) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(iii) using an open flare shall install, calibrate, maintain, and operate according to the manufacturers specifications the following equipment:
 - (1) Heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame
 - (2) A device that records flow to or bypass of the flare. The Permittee shall either install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen minutes; or secure the bypass line valve in the closed position with a carseal or a lock-and-key type configuration. A visual inspection of the seal or closure of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- (d) The Permittee seeking to comply with 40 CFR 60.752(b)(2)(iii) using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40 CFR 60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Quality (OAQ) shall review the information and either approve it, or request that additional information be submitted. The Office of Air Quality (OAQ) may specify additional monitoring procedures.
- (e) The Permittee seeking to install a collection system that does not meet the specifications in 40 CFR 60.759 or seeking to monitor alternative parameters to those required by 40 CFR 60.753 through 40 CFR 60.756 shall provide information satisfactory to the Office of Air Quality (OAQ) as provided in 40 CFR 60.752(b)(2)(i)(B) and (C) describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The Office of Air Quality (OAQ) may specify additional appropriate monitoring procedures.
- (f) The Permittee seeking to demonstrate compliance with 40 CFR 60.755(c), shall monitor surface concentrations of methane according to the instrument specifications and procedures provided in 40 CFR 60.755(d). Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

D.1.8 Compliance Provisions [40 CFR 60.755]

- (a) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the specified methods below shall be used to determine whether the gas collection system is in compliance with 40 CFR 60.752(b)(2)(i).
 - (1) For the purpose of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 60.752(b)(2)(ii)(A)(1), one of the following equations shall be used. The k and L_0 kinetic factors should be those published in the most recent Compilation of Air Pollution Emission Factors

(AP42) or other site-specific values demonstrated to be appropriate and approved by the Office of Air Quality (OAQ). If k has been determined as specified in 40 CFR 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_o R (e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, year⁻¹

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years.

c = time since closure, years (for an active landfill $c = 0$ and $e^{-kc} = 1$)

For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i})$$

where,

Q_M = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, year⁻¹

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the i^{th} section, megagrams

t_i = age of the i^{th} section, years

If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in 40 CFR 60.755(a)(1)(i) and (ii). If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in 40 CFR 60.755(a)(1)(i) or (ii) or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment.

- (2) For the purposes of determining sufficient density of gas collector for compliance with 40 CFR 60.752 (b)(2)(ii)(A)(2), the Permittee shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the Office of Air Quality (OAQ), capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards.
- (3) For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(3), the Permittee shall measure gauge pressure in the gas collection header at each

individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days, except for the three conditions allowed under 40 CFR 60.753(b). If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.

- (4) The Permittee is not required to expand the system as required in 40 CFR 60.755(a)(3) during the first 180 days after gas collection system start-up.
 - (5) For the purpose of identifying whether excess air infiltration into the landfill is occurring, the Permittee shall monitor each well monthly for temperature and nitrogen or oxygen as provided in 40 CFR 60.753(c). If a well exceeds one of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within 120 days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the Administrator for approval.
 - (6) If the Permittee seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii)(A)(4) through the use of a collection system not conforming to the specifications provided in 40 CFR 60.759 shall provide information satisfactory to the Office of Air Quality (OAQ) as specified in 40 CFR 60.752 (b)(2)(i)(C) demonstrating that off-site migration is being controlled.
- (b) For purposes of compliance with 40 CFR 60.753(a), the Permittee shall place each well or design component of a controlled landfill as specified in the approved design plan as provided in 40 CFR 60.752(b)(2)(i). Each well shall be installed no later than 60 days after the date on which the initial solid waste has been in place for a period of five (5) years or more if active or two (2) years or more if closed or at final grade.
 - (c) The following procedures shall be used for compliance with the surface methane operational standard as provided in 40 CFR 60.753 (d):
 - (1) After installation of the collection system, the Permittee shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at 30 meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 60.755(d).
 - (2) The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from perimeter wells.
 - (3) Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of appendix A of 40 CFR 60, except that the probe inlet shall be placed within five(5) to ten(10) centimeters of the ground. Monitoring shall be performed during typical meteorological conditions.

- (4) Any reading of 500 parts per million or more above background at any location shall be recorded as a monitored exceedance and the actions specified in 40 CFR 60.755(c)(4)(i) through (v) should be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 60.753(d).

The location of each monitored exceedance shall be marked and the location recorded.

Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made and the location shall be re-monitored within ten (10) calendar days of detecting the exceedance.

If the re-monitoring of the location shows a second exceedance, additional corrective action shall be taken and the location shall be monitored again within ten (10) days of the second exceedance. If re-monitoring shows a third exceedance for the same location, the action specified in paragraph 40 CFR 60.755(c)(4)(v) of this section shall be taken, and no further monitoring of that location is required until the action specified in 40 CFR 60.755(c)(4)(v) has been taken.

Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day remonitoring specified in 40 CFR 60.755(c)(4)(ii) or (iii) shall be re-monitored one (1) month from the initial exceedance. If the one (1)-month re-monitoring shows a concentration less than 500 parts per million above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one (1)-month remonitoring shows an exceedance, the actions specified in 40 CFR 60.755(c)(4)(iii) or (v) shall be taken.

For any location where monitored methane concentration equals or exceeds 500 parts per million above background three times within a quarterly period, a new well or other collection device shall be installed within 120 calendar of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Office of Air Quality (OAQ) for approval.

- (5) The Permittee shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.
- (d) The Permittee seeking to comply with the provisions of 40 CFR 60.755(c) shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:
- (1) The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of appendix A of 40 CFR 60, except the methane shall replace all references to volatile organic compound (VOC).
 - (2) The calibration gas shall be methane, diluted to a nominal concentration of 500 parts per million in air.
 - (3) To meet the performance evaluation requirements in section 3.1.3 of Method 21 of appendix A of 40 CFR 60, the instrument evaluation procedures of section 4.4 of Method 21 of appendix A of 40 CFR 60 shall be used.

- (4) The calibration procedures provided in section 4.2 of Method 21 of appendix A of 40 CFR 60 shall be followed immediately before commencing a surface monitoring survey.
- (e) The provisions of 40 CFR 60.755 shall apply at all times, except during periods of startup, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction, shall not exceed five (5) days for collection systems and shall not exceed one (1) hour for treatment or control devices.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Non Methane Organic Compound (NMOC) Rate Calculation [40 CFR 60.754]

Pursuant to 40 CFR 60.754 the Permittee shall:

- (a) Calculate the non methane organic compound (NMOC) emission rate using either the equation provided in 40 CFR 60.754(a)(1)(i) or the equation provided in 40 CFR 60.754(a)(1)(ii). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in 40 CFR 60.754(a)(1)(i), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in paragraph 40 CFR 60.754(a)(1)(ii), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k , 170 cubic meters per megagram for L_o , and 4,000 parts per million by volume as hexane for the C_{NMOC} . For landfills located in geographical areas with a thirty year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorological site, the k value to be used is 0.02 per year.

The following equation shall be used if the actual year-to-year solid waste acceptance rate is known:

$$M_{NMOC} = \sum_{i=1}^n 2 k L_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year
 k = methane generation rate constant, year⁻¹
 L_o = methane generation potential, cubic meters per megagram solid waste
 M_i = mass of solid waste in the i^{th} section, megagrams
 t_i = age of the i^{th} section, years
 C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
 3.6×10^{-9} = conversion factor

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown:

$$M_{NMOC} = 2 L_o R (e^{-k_c} - e^{-k_t}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year
 L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, year⁻¹
t = age of landfill, years
C_{NMOC} = concentration of NMOC, parts per million by volume as hexane
c = time since closure, years. For active landfill c = 0 and e^{-kc} = 1
3.6 x 10⁻⁹ = conversion factor

The mass of the nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

- (b) Tier 1. The Permittee shall compare the calculated NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC emission rate calculated in 40 CFR 60.754(a)(1) is less than 50 megagrams per year, then the landfill owner shall submit an emission rate report as provided in 40 CFR 60.757(b)(1), and shall recalculate the NMOC mass emission rate annually as required under 40 CFR 60.752(b)(1). If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in 40 CFR 60.754(a)(3).

Tier 2. The Permittee shall determine the NMOC concentration using the following sampling procedure. The Permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The Permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25C of appendix A of 40 CFR 60 or Method 18 of appendix A of 40 CFR 60. If using Method 18 of appendix A of 40 CFR 60, the minimum list of compounds to be tested shall be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42). If composite sampling is used, equal volumes shall be taken from each sample probe. If more than the required number of samples are taken, all samples shall be used in analysis. The Permittee shall divide the NMOC concentration from Method 25C of appendix A by six to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

The Permittee shall recalculate the NMOC mass emission rate using the equations provided in 40 CFR 60.754(a)(1)(i) and (a)(1)(ii) and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in 40 CFR 60.754(a)(1).

If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the Permittee shall either comply with 40 CFR 60.752(b)(2), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in 40 CFR 60.754(a)(4).

If the resulting NMOC mass emission rate is less than 50 megagrams per year, the Permittee shall submit a periodic estimate of the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every five (5) years using the methods in 40 CFR 60.754(a)(3).

Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of appendix A of 40 CFR 60. The Permittee shall

estimate the NMOC mass emission rate using equations in 40 CFR 60.754(a)(1)(i) or (a)(1)(ii) and using a site-specific methane generation rate constant k , and the site specific NMOC concentration as determined in 40 CFR 60.754(a)(3) instead of the default values provided in 40 CFR 60.754(a)(1). The Permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year.

If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the Permittee shall comply with 40 CFR 60.752(b)(2).

If the NMOC mass emission rate is less than 50 megagrams per year, then the Permittee shall submit a periodic emission rate report as provided in 40 CFR 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in 40 CFR 60.757(b)(1) using the equations in 40 CFR 60.754(a)(1) and using the site-specific methane generation rate constant and NMOC concentration obtained in 40 CFR 60.754(a)(3). The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

The Permittee may use other methods to determine the NMOC concentration or a site specific k as an alternative to the methods required in 40 CFR 60.754(a)(3) and (a)(4) if the method has been approved by the Administrator.

- (c) When calculating emissions for PSD purposes, the owner or operator of each municipal solid waste landfill subject to 40 CFR 60.754 shall estimate the NMOC emission rate for comparison to the PSD major source and significance levels in 40 CFR 51.166 or 40 CFR 52.21 using AP-42 or other approved measurement procedures. If a collection system, which complies with the provisions of 40 CFR 60.752(b)(2) is already installed, the Permittee shall estimate the NMOC emission rate using the procedures provided in 40 CFR 60.754(b).

The Permittees initial NMOC report was submitted on October 6, 1997.

D.1.10 Reporting Requirements [40 CFR 60.757]

Pursuant to 40 CFR 60.757, except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee shall:

- (a) Submit an initial design capacity report to the Office of Air Quality (OAQ) no later than 90 days after October 8, 1997. An amended design capacity report shall be submitted to the Office of Air Quality (OAQ) providing notification of any increase in the design capacity of the landfill. The Permittees initial design capacity report was submitted on June 10, 1996.
- (b) Submit a non methane organic compound (NMOC) emission rate report to the Office of Air Quality initially and annually thereafter, except as provided for in 40 CFR 60.757(b)(1)(ii) or (b) (3). The Office of Air Quality (OAQ) may request such additional information as may be necessary to verify the reported NMOC emission rate. The report should contain an annual or 5-year estimate of the non methane organic compound (NMOC) emission rate using the formula and procedures provided in 40 CFR 60.754 (a) or (b), as applicable. The initial NMOC emission rate report may be combined with the initial design capacity report required in 40 CFR 60.757(a) and shall be submitted no later than indicated in paragraphs 40 CFR 60.757(b)(1)(i)(A) and (B). June 10, 1996 for landfills that commenced construction, modification, or reconstruction on or after May 30, 1991, but before March 12, 1996, or ninety days after the date of commenced construction, modification, or reconstruction for landfills that commence construction, modification, or reconstruction on or after March 12, 1996. Subsequent NMOC emission

rate reports shall be submitted annually thereafter, except as provided in 40 CFR 60.757(b)(1)(ii) and (b)(3). If the estimated NMOC emission rate as reported in the annual report to the Office of Air Quality (OAQ) is less than 50 megagrams per year in each of the next five (5) consecutive years, the Permittee may elect to submit an estimate of the NMOC emission rate for the next five (5) year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the Office of Air Quality (OAQ). This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5) year estimate, a revised five (5) year estimate shall be submitted to the Office of Air Quality. The revised estimate shall cover the five (5) year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate. The NMOC emission rate report shall include all the data, calculations, sample reports, and measurements used to estimate the annual or five (5) year emission rate. The Permittee is exempted from the requirements of 40 CFR 60.757(b)(1) and (2) after the installation of a collection and control system in compliance with 40 CFR 60.752 (b)(2), during such time as the system is in operation and in compliance with 40 CFR 60.753 and 60.755.

- (c) Submit a collection and control system design plan to the Office of Air Quality (OAQ) within one (1) year of the first non methane organic compound (NMOC) emission rate report, required under 40 CFR 60.757(b), in which NMOC emission rate exceeds 50 megagrams (Mg) per year; except if the Permittee elects to recalculate the NMOC emission rate after Tier 2 sampling and analysis as provided in 40 CFR 60.754(a)(3) and the resulting rate is less than 50 megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than 50 megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within 180 days of the first calculated exceedance of 50 megagrams per year. If the Permittee elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in 40 CFR 60.754(a)(4), and the resulting NMOC emission rate is less than 50 megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of 40 CFR 60.754(a)(4) and the resulting site-specific methane generation rate constant (k) shall be submitted to the Office of Air Quality (OAQ) within one (1) year of the first calculated emission rate exceeding 50 megagrams per year.
- (d) Submit a closure report to the Office of Air Quality (OAQ) within thirty days of waste acceptance cessation. The Office of Air Quality (OAQ) may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the Office of Air Quality (OAQ), no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4).
- (e) Submit an equipment removal report to the Office of Air Quality (OAQ) thirty (30) days prior to removal or cessation of operation of the control equipment. The equipment removal report shall contain all of the following items: a copy of the closure report submitted in accordance with 40 CFR 60.757(d), a copy of the initial performance test report demonstrating that the fifteen (15) year minimum control period has expired, and dated copies of three (3) successive NMOC emission rate reports demonstrating that the

landfill is no longer producing 50 megagrams or greater of NMOC per year. The Office of Air Quality (OAQ) may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) have been met.

- (f) Annual reports of the following recorded information. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c), except as otherwise provided for an approved collection and control system design plan.
- (1) Value and length of time for exceedance of applicable parameters monitored under 40 CFR 60.756(a), (b), (c), and (d).
 - (2) Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under 40 CFR 60.756.
 - (3) Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.
 - (4) All periods when the collection system was not operating in excess of five (5) days.
 - (5) Location of each exceedance of the 500 parts per million methane concentration as provided in 40 CFR 60.753(d) and the concentration recorded at each location for which an exceedance was recorded in the previous month.
 - (6) Date of installation and the location of each well or collection system expansion added pursuant to 40 CFR 60.755(a)(3), (b), and (c)(4).
- (g) The Permittee seeking to comply with 40 CFR 40.752(b)(2)(iii) shall include the following information with the initial performance test report required under 40 CFR 60.8:
- (1) A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion.
 - (2) The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based.
 - (3) The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material.
 - (4) The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area.
 - (5) The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill

- (6) The provision for the control of off-site migration.
- (h) A summary of the above information shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit.

D.1.11 Record Keeping Requirements [326 IAC 12] [40 CFR 60.758] Pursuant to 40 CFR 60.758

- (a) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to 40 CFR 60.752(b) shall keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report which triggered 40 CFR 60.752(b), the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within four (4) hours. Either paper copy or electronic formats are acceptable.
- (b) Except as provided in 40 CFR 60.752(b)(2)(i)(B), or approved variances contained within the collection and control system design plan, the Permittee of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment listed in (a) through (d) below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of control device vendor specifications shall be maintained until removal.
 - (1) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(ii):

The maximum expected gas generation flow rate as calculated in 40 CFR 60.755(a)(1). The Permittee may use another method to determine the maximum gas generation flow rate, if the method has been approved by the Office of Air Quality (OAQ).

The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in 40 CFR 60.759(a)(1).
 - (2) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii) through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity greater than 44 megawatts:

The average combustion temperature measured at least every fifteen (15) minutes and averaged over the same time period of the performance test.

The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) achieved by the control device.
 - (3) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(B)(1) through use of a boiler or process heater of any size: a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.
 - (4) Where the Permittee subject to the provisions of 40 CFR 60.758 seeks to demonstrate compliance with 40 CFR 60.752(b)(2)(iii)(A) through use of an open flare, the flare type (i.e., steam-assisted, air -assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare

pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent.

- (c) Except as provided in 40 CFR 60.752(b)(2)(i)(B), or approved variances contained within the Collection and Control System Design Plan required pursuant to this rule, the Permittee of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.
- (1) The following constitute exceedances that shall be recorded and reported under 40 CFR 60.757(f):
- For enclosed combustors except for boilers and process heaters with design heat input capacity of 44 megawatts (150 million British thermal unit per hour) or greater, all 3-hour periods of operation during which the average combustion temperature was more than 28EC below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 60.752(b)(2)(iii) was determined.
- For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under 40 CFR 60.758(b)(3)(i) of this section.
- (2) The Permittee subject to 40 CFR 60.758 shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under 40 CFR 60.756.
- (3) The Permittee subject to the provisions of 40 CFR 60.758 who uses a boiler or process heater with a design heat input capacity of 44 megawatts or greater to comply with 40 CFR 60.752(b)(2)(iii) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State, local, Tribal or Federal regulatory requirements.)
- (4) The Permittee seeking to comply with the provisions of 40 CFR 60.758 by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 60.756(c), and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent.
- (d) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to the provisions of this subpart shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.
- (1) The Permittee subject to the provisions of 40 CFR 60.758 shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified in 40 CFR 60.755 (b).
- (2) The Permittee subject to the provisions of 40 CFR 60.758 shall keep readily accessible documentation of the nature, date of deposition, amount, and

location of asbestos-containing or nondegradable waste excluded from collection as provided in 40 CFR 60.759 (a)(3)(i) as well as any non-productive areas excluded from collection as provided in 40 CFR 60.759 (a)(3)(ii).

- (e) Except as provided in 40 CFR 60.752(b)(2)(i)(B), the Permittee subject to the provisions of this subpart shall keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.
- (f) Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than 2.5 million megagrams or 2.5 million cubic meters, as provided in the definition of design capacity, shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable.

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

- (a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [40 CFR 52, Subpart P]

Pursuant to 40 CFR 52, Subpart P, the allowable PM emissions from each of the brazing, cutting, soldering, or welding processes shall not exceed the allowable emission rate based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:

One (1) parts washing station, with a maximum capacity of 20 gallons.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under

the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**Indiana Department of Environmental Management
Office of Air Quality**

**Addendum to the
Technical Support Document (TSD) for a Part 70 Significant Source
Modification and a Part 70 Significant Permit Modification**

Source Background and Description

Source Name:	Jay County Landfill, Inc.
Source Location:	5825 W. South, Portland, Indiana 47371
County:	Jay
SIC Code:	4953
Operation Permit No.:	T075-12836-00029
Operation Permit Issuance Date:	March 26, 2002
Significant Source Modification No.:	075-16124-00029
Significant Permit Modification No.:	075-16132-00029
Permit Reviewer:	ERG/YC

On December 11, 2002, the Office of Air Quality (OAQ) had a notice published in the Commercial Review, Portland, Indiana stating that Jay County Landfill had applied for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification to construct and operate a landfill gas recovery plant. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On January 9, 2003, Ms. Laura L. Nemann with Earth Tech, on behalf of Jay County Landfill, Inc. [referred as the source], submitted comments on the proposed Significant Source Modification and Significant Permit Modification. The summary of the comments is as follows:

Comment 1:

The source stated that in the cover letter for the Significant Source Modification, paragraph (b)(2) incorrectly listed only two (2) engine oil day tanks. Since there are a total of four (4) engines in the proposed landfill gas recovery plant, there will be a total of four (4) engine oil day tanks.

Response to Comment 1:

The number of the total engine oil day tanks has been corrected to four (4) tanks in the cover letter for the Significant Source Modification. The number of the total engine oil day tanks was correctly listed as four (4) engine tanks in the proposed permits for the Significant Source Modification and Significant Permit Modification. Therefore, no change was made in the permits as a result of this comment.

Comment 2:

The source stated that they are not subject to the control monitoring, record keeping, and reporting requirements in the New Source Performance Standards (NSPS) for Municipal Solid Waste Landfill (40 CFR 60, Subpart WWW) until the NMOC emissions are greater than 50 megagrams (Mg) per year. For clarification purposes, the source requested to revise Condition C.10 - Compliance Monitoring to include the following language:

"Unless otherwise specified in the approval for the new emission units, compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins."

The source also stated that the start date of monitoring for sites with an existing gas collection and control system has never been clearly defined in the NSPS, and has been subject to various contradictory interpretations by the US EPA over the past several years. In order to clearly establish when the NSPS monitoring, record keeping, reporting and performance testing of the engines shall occur at this site, the source requested to add the following language to Condition D.1.7 - Monitoring:

"Monitoring, recordkeeping and reporting obligations for the engines pursuant to the requirements of 40 CFR 60 Subpart WWW shall be initiated within two months of IDEM's approval of the facility's Landfill Gas Collection and Control System Design Plan."

Response to Comment 2:

The language requested to be included in Condition C.10 was originally included in the proposed Significant Permit Modification. Therefore, no change has been made to Condition C.10 as the result of this comment.

Pursuant to 40 CFR 60.752(b)(2)(i) and 40 CFR 60.752(b)(2)(i), when the calculated NMOC emission rate is equal to or greater than 50 Mg per year, the Permittee shall submit a collection and control system design plan (including any alternative operational standards, test methods, procedures, compliance measures, monitoring, record keeping, or reporting requests) within 1 year, and shall install a collection and control system within 30 months. Pursuant to 40 CFR 60.752(b)(2)(v), the Permittee shall "operate" the collection and control system installed in accordance with the provisions of 40 CFR 60.753 (operational standards), 60.755 (compliance provisions), and 60.756 (monitoring of operations) if the calculated NMOC emission rate is equal to or greater than 50 Mg per year. Therefore, the monitoring, record keeping, and reporting requirements for the collection and control system, as specified in 40 CFR 60.756, should be implemented when the collection and control system starts operating.

The source requested to implement the monitoring, record keeping, and reporting requirements for the collection and control system within two (2) months of IDEM's approval of the collection and control system design plan. The approval date of the collection and control system design plan may be earlier than 30 months after the submittal date of the first annual report in which the emission rate equals or exceeds 50 Mg per year. The requested language for Condition D.1.7 might indicate that the source is required to install and operate the control system earlier than the deadline specified by 40 CFR 60.752 (b)(2).

IDEM may allow for a longer compliance schedule pursuant to the provision of 40 CFR 60.24(f)(3). This extension may be based on "other factors" specific to the facility that make application of a less stringent standards, or final compliance schedule more reasonable. Therefore, no change has been made as the result of this comment.

Comment 3:

The source requested to include language in the permit to refer to the future approved design plan variances in Condition D.1.10(f) and Condition D.1.11(b) of the proposed Significant Source Modification and Significant Permit Modification.

Response to Comment 3:

Pursuant to 40 CFR 60.752 (b)(2)(i), the collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the owner or operator, and this plan will need IDEM, OAQ's approval. Therefore, there might be variances in monitoring, recordkeeping, and reporting requirements from the requirements in 40 CFR 60, Subpart WWW in the approved collection and control system design plan. For clarification purposes, Conditions D.1.10(f) and D.1.11(b) in the Source Modification and Permit Modification permits have been revised as follows:

D.1.10 Reporting Requirements [40 CFR 60.757]

- (f) Annual reports of the following recorded information. The initial annual report shall be submitted within 180 days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under 40 CFR 60.758(c), **except as otherwise provided for in an approved collection and control system design plan.**

D.1.11 Record Keeping Requirements [326 IAC 12] [40 CFR 60.758] Pursuant to 40 CFR 60.758

- (b) Except as provided in 40 CFR 60.752(b)(2)(i)(B), **or approved variances contained within the collection and control system design plan**, the Permittee of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment listed in (a) through (d) below as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of control device vendor specifications shall be maintained until removal.

Comment 4:

The source stated that the flow rate of landfill gas of the proposed engines varies from 250 scfm to 325 scfm for each engine depending on the quality of gas (i.e. percent methane) combusted by the engine. With respect to the crankcase breather vents, the consumption of oil by each engine also varies greatly from month to month, depending on the time between maintenance events and other operating factors. Therefore, the source requested to revise the source description for the engines to read as follows:

"Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines..... each with a landfill gas feeding rate of *approximately* 295 scfm..... Each engine is equipped with a crankcase for engine oil, which consumes *approximately* 20 gallons of engine oils per month and exhausts through a crankcase breather vent."

Response to Comment 4:

A flow rate of 295 scfm was listed in the permit application received on September 17, 2002 for each proposed engine. Since the potential to emit PM and PM10 of the proposed engines was calculated based on the maximum flow rate of these engines, the flow rate number in the unit description should present the maximum flow rate of the proposed engines correctly. Therefore, the maximum flow rate of each landfill gas engine in the proposed gas recovery plant has been revised to 325 scfm in this Significant Source Modification and Significant Permit Modification.

The emissions from the crankcase breather vents are mainly in particulate form. Since the PM/PM10 emissions from each crankcase are less than 5 tons/yr and are considered

insignificant, a better description the maximum oil consumption rate for these crankcase should be a maximum 240 gallons per year (20 gal/month x 12 month/yr = 240 gal/yr). Therefore, the unit description in Conditions A.2 and D.1, in both the Source Modification and the Permit Modification, has been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

- (b) Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a **maximum** landfill gas feeding rate of ~~295~~ **325** scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of ~~20~~ **240** gallons of engine oils per ~~month~~ **year** and exhausts through a crankcase breather vent.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) municipal solid waste landfill, identified as LF1, constructed in 1970, with a maximum capacity of 3,739,999 tons, and controlled by a utility flare, identified as FL1, with a maximum flow rate of 1500 cubic feet per minute, and exhausting through stack FLS1.
- (b) Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a **maximum** landfill gas feeding rate of ~~295~~ **325** scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of ~~20~~ **240** gallons of engine oils per ~~month~~ **year** and exhausts through a crankcase breather vent.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

The changes will also affect the potential to emit PM and PM10 from the proposed landfill gas fired engines. Therefore, the "Potential to Emit of Modification After Issuance" table in the Technical Support Document (TSD) for both the Source Modification and the Permit Modification has been revised as shown below:

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
4 Landfill Gas-Fired Engines	8.34 9.18	8.34 9.18	5.35	0.92	132.8	88.5	0.20
4 Crankcases	3.55	3.55	-	-	-	-	-
Storage Tanks	-	-	-	1.0	-	-	Negligible
Degreasing Operations	-	-	-	1.0	-	-	Negligible
Welding Operations	1.0	1.0	-	-	-	-	Negligible
Total Emissions of the Modification	41.9 13.7	41.9 13.7	5.35	2.92	132.8	88.5	0.20
Total Emissions of the Existing Source	0	0	12.4	24.0	72.5	13.3	5.45

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Total Emissions of the Entire Source After Modification	44.9 13.7	44.9 13.7	17.8	26.9	205.3	101.8	5.65
PSD Thresholds	250	250	250	250	250	250	NA

Comment 5:

The source stated that the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste (40 CFR 63, Subpart AAAAA) will be published in January, 2003 in the Federal Register. The source suggested to incorporate the NESHAP requirements into this Source Modification and Permit Modification.

Response to Comment 5:

The NESHAP for Municipal Solid Waste (40 CFR 63, Subpart AAAAA) was promulgated on January 16, 2003. This source was constructed in 1970 and has accepted waste since November 8, 1978. This source is an area source landfill source that has a design capacity greater than 2.5 megagrams (Mg). However, the NMOC emissions from this source are currently less than 50 Mg/yr and are expected to exceed 50 Mg/yr in 2004. Therefore, this source is not subject to the requirements of the NESHAP for Municipal Solid Waste (40 CFR 63, Subpart AAAAA) at this time, pursuant to 40 CFR 63.1935(a). This source will be subject to this NESHAP when the NMOC exceeds 50 Mg/yr. IDEM, OAQ has determined not to include the NESHAP requirements now and will revise the source's Title V permit when the source becomes subject to this NESHAP. Therefore, no change was made as a result of this comment.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification

Source Background and Description

Source Name:	Jay County Landfill, Inc.
Source Location:	5825 W. South, Portland, Indiana 47371
County:	Jay
SIC Code:	4953
Operation Permit No.:	T075-12836-00029
Operation Permit Issuance Date:	March 26, 2002
Significant Source Modification No.:	075-16124-00029
Significant Permit Modification No.:	075-16132-00029
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from Jay County Landfill, Inc. relating to the construction and operation of the following emission units and pollution control devices:

One (1) landfill gas recovery plant, consisting of the following:

- (a) Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a landfill gas feeding rate of 295 scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of 20 gallons of engine oil per month and exhausts through a crankcase breather vent.
- *(b) The following VOC and HAP storage containers, including storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; and vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids:
 - (1) Two (2) petroleum storage tanks, each with a maximum capacity of 1,000 gallons.
 - (2) Four (4) engine oil day tank, each with a maximum capacity of 20 gallons.
 - (3) One (1) antifreeze storage tank, with a maximum capacity of 550 gallons.
- *(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- *(d) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:
 - One (1) parts washing station, with a maximum capacity of 20 gallons.
- *(e) A laboratory as defined in 326 IAC 2-7-1(20)(C), including a gas chromatograph.

- * (f) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- * (g) Cleaners and solvents having a vapor pressure equal to or less than 2 kPa (15mm Hg or 0.3 psi) measured at 38 degrees C (100°F) or having a vapor pressure equal to or less than 0.7 kPa (5mm Hg or 0.1 psi) measured at 20°C (68°F). The use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- * (h) Paved and unpaved roads and parking lots with public access.

*Note: These emission units are insignificant activities, as defined in 326 IAC 2-7-1(21).

History

On September 17, 2002, Jay County Landfill, Inc. submitted an application to the OAQ requesting to add a landfill gas recovery plant to their existing landfill site. This recovery plant consists of four (4) landfill gas-fired engines and each engine has a maximum flow rate of 295 scfm and a maximum heat input of 8.9 MMBtu/hr. Currently, the source operates a 1,500 scfm utility flare as an emission control system. The four (4) new engines at the recovery plant are also considered as control systems because these engines will consume landfill gas to generate electric power. Jay County Landfill, Inc. was issued a Part 70 permit (#075-16124-00029) on March 26, 2002.

In addition, the Permittee requested the following alternative monitoring conditions in the modification application received on September 17, 2002, for the proposed landfill gas engines:

- (a) Pursuant to 40 CFR 60.756(b)(1), each owner or operator using an enclosed combustor shall calibrate, maintain and operate a temperature monitoring device equipped with a continuous recorder. Pursuant to 40 CFR 60.758(b)(2), the average combustion temperature measured in the engines shall be measured and recorded every 15 minutes. Pursuant to 40 CFR 60.758(c)(1)(i), any engine temperature, which is 28EC below the averaged temperature, shall be recorded and reported.

The Permittee stated it is not physically possible to take a temperature reading from the engines. Therefore, the Permittee requested to eliminate these requirements related to the temperature monitoring.

- (b) Pursuant to 40 CFR 60.756(b)(2)(i), the engine shall install, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes.

The Permittee proposed to measure the gas flow rates to the engines continuously, record an hourly average within the flow meter software, and report the data on a monthly basis using a monthly average calculated from the hourly averages by the flow meter.

- (c) Pursuant to 40 CFR 60.754(b), after installation of a collection and control system, the Permittee shall perform a stack testing for NMOC to demonstrate compliance with 40 CFR 60.755.

The Permittee requested to conduct performance testing on only one of the four (4) engines since these engines are identical.

- (d) The Permittee proposed to revise the general conditions B.15 (Deviations from Permit Requirements and Conditions) and C.10 (Compliance Monitoring) in the source's Title V permit to reflect the allowance of the alternative monitoring conditions.

Since the NMOC emissions rate from this source is less than 50 Mg/yr, this source has not been the subject to 40 CFR 60.752(b), which requires the source to submit a collection and control

system design plan within one year and to install the collection and control system within 30 months after the first annual report in which the emission rate equals or exceeds 50 Mg/yr.

Pursuant to 40 CFR 60.752 (b)(2)(i), the collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the owner or operator and this plan will need IDEM, OAQ's approval. Therefore, the alternative monitoring requirements proposed shall be submitted with the collection and control system plan and will be reviewed then. No monitoring, record keeping, or reporting requirements will be revised in this modification.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
ES1	Engine	22.83	0.83	5,843	800
ES2	Engine	22.83	0.83	5,843	800
ES3	Engine	22.83	0.83	5,843	800
ES4	Engine	22.83	0.83	5,843	800

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and the Part 70 Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 17, 2002. Additional information was received on November 6, 2002 and November 8, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 2).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	11.9
PM-10	11.9

Pollutant	Potential To Emit (tons/year)
SO ₂	5.35
VOC	2.92
CO	132.8
NO _x	88.5

HAP's	Potential To Emit (tons/year)
Hydrogen Chloride	0.2
Other HAPs	Negligible
TOTAL	0.2

Justification for Modification

This modification is being performed through a Part 70 Significant Source Modification pursuant to 326 IAC 2-7-10.5(f) as the potential to emit NO_x is greater than 25 tons per year and the potential to emit CO is greater than 100 tons per year. The permit modification is being performed through a Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because this is a modification under a provision of Title I of CAA.

County Attainment Status

The source is located in Jay County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Jay County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Jay County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
 Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	0
PM-10	0
SO ₂	12.38
VOC	23.99
CO	72.49
NO _x	13.32

- (a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) These emissions are based upon the Technical Support Document (TSD) for the source's Part 70 Permit (#075-12836-00029, issued March 26, 2002).

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
4 Landfill Gas-Fired Engines	8.34	8.34	5.35	0.92	132.8	88.5	0.20
4 Crankcases	3.55	3.55	-	-	-	-	-
Storage Tanks	-	-	-	1.0	-	-	Negligible
Degreasing Operations	-	-	-	1.0	-	-	Negligible
Welding Operations	1.0	1.0	-	-	-	-	Negligible
Total Emissions of the Modification	11.9	11.9	5.35	2.92	132.8	88.5	0.20
Total Emissions of the Existing Source	0	0	12.4	24.0	72.5	13.3	5.45
Total Emissions of the Entire Source After Modification	11.9	11.9	17.8	26.9	205.3	101.8	5.65
PSD Thresholds	250	250	250	250	250	250	NA

This modification to an existing minor stationary source is not major because the source is going to maintain their PSD minor source status. Therefore, pursuant to 326 IAC 2-2 and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) The source is subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.750-759, Subpart WWW) because the municipal solid waste landfill commenced construction, reconstruction or modification or began accepting waste on or after May 30, 1991. The requirements of 40 CFR 60, Subpart WWW previously applied to this landfill and are contained in the Title V permit #075-12836-00029, issued on March 26, 2002. However, the NMOC emissions from this source are less than 50 Mg/yr, and therefore, this source is not subject to the collection and control system requirements, pursuant to 40 CFR 60.752(b)(2). The NMOC emissions from this source is expected to exceed 50 Mg/yr in 2004. Please see Title V permit for specific requirements of this landfill.

Pursuant to 40 CFR 60.752(b)(2)(ii)(A), if the NMOC emission rate from the landfill site is equal or greater than 50 megagram per year, the owner or operator shall install a control system. The Permittee proposed to construct and operate a landfill gas recovery plant which includes four (4) 8.9 MMBtu/hr engines. These engines will combust landfill gas to produce electric power. Therefore, these engines are also considered control devices.

Pursuant to permit #075-12836-00029, issued on March 26, 2002, and 40 CFR 60.756, the Permittee, seeking to comply with 40 FR 60.752(b)(2)(iii) using an enclosed combustor, shall calibrate, maintain, and operate according to the manufacturers specifications, the following equipment:

- (1) A temperature monitoring device equipped with a continuous recorder and having minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius of $\pm 0.5^\circ\text{C}$, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.
 - (2) A device that records flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.
- (b) The storage tanks at this source have capacities less than 40 cubic meters (10,560 gallons). Therefore, the New Source Performance Standards for Volatile Organic Liquid Storage Vessels for which construction, reconstruction, or modification commenced after July 23, 1984 (40 CFR 60.110b - 117b, Subpart Kb) are not applicable to these tanks.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.
- (d) The solvents applied for the degreasing operations (insignificant activities) do not contain any halogenated HAP specified in 40 CFR 63.460. Therefore, the NESHAP for Halogenated Solvent Cleaning (40 CFR Part 63.460 - 63.470, Subpart T) is not applicable to this source.

State Rule Applicability - Four Engines (EG1, EG2, EG3, and EG4)

326 IAC 5-1 (Opacity Limitations)

This source is located in Jay County. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 9-1-2 (Carbon Monoxide Emission Requirements)

This source is not among the listed source categories in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1-2 are not applicable.

326 IAC 10-1-3 (Nitrogen Oxide Emission Requirements)

This source is not located in Clark or Floyd County. Therefore, the requirements of 326 IAC 10-1-3 are not applicable.

State Rule Applicability - Insignificant Activities

326 8-4-3 (Petroleum Liquid Storage Facilities)

The petroleum storage tanks have capacities less than 39,000 gallons. Therefore, the requirements of 326 IAC 8-4-3 are not applicable to these tanks.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

This source is not located in Clark, Floyd, Lake, or Porter County. Therefore, the requirements of 326 IAC 8-9-1 are not applicable.

326 IAC 6-3-2 (Process Operations)

On June 12, 2002, revisions to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) became effective; this rule was previously referred to as 326 IAC 6-3 (Process Operations). As of the date this permit is being issued, these revisions have not been approved by EPA into the Indiana State Implementation Plan (SIP); therefore, the following requirement from the previous version of 326 IAC 6-3 (Process Operations) which has been approved into the SIP will remain applicable requirement until the revisions to 326 IAC 6-3 are approved into the SIP and the condition is modified in a subsequent permit action.

Pursuant to 40 CFR 52, Subpart P, the particulate matter (PM) from each of the welding and cutting operations shall be limited by the pounds per hour limit calculated by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Under the rule revision, welding operations which consume less than 625 pounds of wire per day and touch cutting operations which cut less than 3,400 inches per hour of one inch thickness stock are exempted from this rule.

326 IAC 8-3-2 (Cold Cleaning Operations)

Any degreaser which uses VOC-containing solvents is considered as a cold cleaning operation. The degreasers, which use VOC content solvents, at this source were constructed after January 1, 1980 and are subject to 326 IAC 8-3-2. Pursuant to 326 IAC 8-3-2, the owner or operator of the cold cleaning operations shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;

- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The degreaser, which uses VOC-containing solvents, and was constructed after July 1, 1990, does not have remote solvent reservoirs. Therefore, the degreaser is subject to 326 IAC 8-3-5 and has the following requirements:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) the solvent is agitated; or
 - (C) the solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
 - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kilo Pascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.

- (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5 (b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. Pursuant to 40 CFR 60.756, the source using an enclosed combustor to comply with the control device requirements under the provision of 40 CFR 60.752(b)(2) shall calibrate, maintain, and operate according to the manufacturers specifications, the following equipment:
 - (1) A temperature monitoring device equipped with a continuous recorder and having minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius of $\pm 0.5^{\circ}\text{C}$, whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity greater than 44 megawatts.
 - (2) A device that records flow to or bypass of the control device. The Permittee shall either; install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.

This monitoring conditions are necessary for the new engines (EG1, EG2, EG3, and EG4) to ensure compliance with 40 CFR 60.756.

Proposed Changes

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a municipal solid waste landfill.

Responsible Official:	Leon Leach Vice President of Operations
Source Address:	5825 W. South, Portland, Indiana 47371
Mailing Address:	P.O. Box 1264, Portland, Indiana 47371
SIC Code:	4953
County Location:	Jay
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) municipal solid waste landfill, identified as LF1, constructed in 1970, with a maximum capacity of 3,739,999 tons, and controlled by a utility flare, identified as FL1, with a maximum flow rate of 1500 cubic feet per minute, and exhausting through stack FLS1.
- (b) **Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a landfill gas feeding rate of 295 scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of 20 gallons of engine oil per month and exhausts through a crankcase breather vent.**

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source **also includes the following**~~does not currently have any~~ insignificant activities **which are specifically regulated**, as defined in 326 IAC 2-7-1 (21)~~that have applicable requirements~~:

- (a) **The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.**
- (b) **Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:**

One (1) parts washing station, with a maximum capacity of 20 gallons.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), **except as allowed for in 40 CFR 60, Subpart WWW or approved variances contained within the Collection and Control System Design Plan**

required pursuant to this rule, the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance, **except as otherwise provided for in 40 CFR 60, Subpart WWW or approved variances contained within the Collection and Control System Design Plan required pursuant to this rule.** If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) municipal solid waste landfill, identified as LF1, constructed in 1970, with a maximum capacity of 3,739,999 tons, and controlled by a utility flare, identified as FL1, with a maximum flow rate of 1500 cubic feet per minute, and exhausting through stack FLS1.
- (b) **Four (4) 1,148 horsepower (8.9 MMBtu/hr) engines, identified as EG1, EG2, EG3, and EG4, using landfill gas as a fuel, each with a landfill gas feeding rate of 295 scfm, and exhausting through stacks ES1, ES2, ES3, and ES4, respectively. Each engine is equipped with a crankcase for engine oil, which consumes a maximum of 20 gallons of engine oil per month and exhausts through a crankcase breather vent.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.3 Standards for air emissions from municipal solid waste landfills [40 CFR 60.752]

Pursuant to 40 CFR 60.752(b)(2), If the calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall:

- (a) **Submit a collection and control system design plan prepared by a professional engineer to the Administrator within 1 year:**
 - (1) **The collection and control system as described in the plan shall meet the design requirements of 40 CFR 60.752(b)(2)(ii).**
 - (2) **The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of 40 CFR 60.753 through 60.758 proposed by the owner or operator.**
 - (3) **The collection and control system design plan shall either conform with specifications for active collection systems in 40 CFR 60.759 or include a demonstration to the Administrator's satisfaction of the sufficiency of the alternative provisions to 40 CFR 60.759.**
 - (4) **The Administrator shall review the information submitted under 40 CFR 60.752(b)(2)(i) (A),(B) and (C) and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative**

systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.

- (b) **Install a collection and control system that captures the gas generated within the landfill as required by 40 CFR 60.752(b)(2)(ii)(A) or (B) and (b)(2)(iii) within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the emission rate is less than 50 megagrams per year, as specified 40 CFR 60.757(c)(1) or (2).**

D.1.34 Operational Standards for Collection and Control Systems [40CFR 60.753]

Pursuant to 40 CFR 60.753, each owner or operator of an MSW landfill with a gas collection and control system used in order to comply with 40 CFR 60.752 (b)(2)(ii) the Permittee shall:

D.1.67 Monitoring [40 CFR 60.756] Except as provided in 40 CFR 60.752(b)(2)(i)(B)

Except as provided in 40 CFR 60.752(b)(2)(i)(B):

- (b) **The Permittee seeking to comply with 40 FR 60.752(b)(2)(iii) using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturers specifications, the following equipment, except as otherwise provided for in 40 CFR 60. Subpart WWW or approved variances contained within the Collection and Control System Design Plan required pursuant to this rule:**

D.1.4011 Record Keeping Requirements [326 IAC 12] [40 CFR 60.758] Pursuant to 40 CFR 60.758

- (c) **Except as provided in 40 CFR 60.752(b)(2)(i)(B), or approved variances contained within the Collection and Control System Design Plan required pursuant to this rule, the Permittee of a controlled landfill subject to the provisions of this subpart shall keep for 5 years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in 40 CFR 60.756 as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.**

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

- (a) **The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [40 CFR 52, Subpart P]

Pursuant to 40 CFR 52, Subpart P, the allowable PM emissions from each of the brazing, cutting, soldering, or welding processes shall not exceed the allowable emission rate based on the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant Activities

- (b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6:

One (1) parts washing station, with a maximum capacity of 20 gallons.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.

- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

 - (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the proposed Part 70 Significant Source Modification No. 075-16124-00029, and the operation of this proposed modification shall be subject to the conditions of the proposed Part 70 Significant Permit Modification No. 075-16132-00029.

Appendix A: Emission Calculations Landfill Gas Combustion

Four (4) Engines (EG1, EG2, EG3, and EG4)

Company Name: Jay County Landfill, Inc.
Address City IN Zip: 5825 W. South, Portland, IN 47371
SSM #: 075-16124-00029
Reviewer: ERG/YC
Date: November 11, 2002

Flow Rate scfm	Methane Volume Percentage	Engine Power HP
1180 (4 units total)	56% (provided by the source)	4592 (4 units total)

	Pollutant						
Emission Factors	PM ^a 48.0 (lbs/MMDSCF)	PM10 ^a 48.0 (lbs/MMDSCF)	SO ₂ ^b 100 (ppmv)	NOx ^c 2.0 (gram/hp-hr)	NMOC ^b 557.8 (ppmv)	CO ^c 3.0 (gram/hp-hr)	HCl ^d 126.4 (ppmv)
Potential Emission in tons/yr	8.34	8.34	5.35	88.50	0.92	132.75	0.20

^a Emission factors are from AP-42, Chapter 2.4, Table 2.4-5: Emission Factors for Landfill Gas Engines, SCC 2-50100421. (AP-42, 11/1998). Assume PM emissions equal PM10 emissions.

^b The total inlet concentrations of Sulfur and non-Methane Organic Compounds are provided by the source. Assume all NMOC emissions are VOC emissions.

^a NOx and CO emission factors are provided by the engine manufacturer, which are greater than the emission factors in AP-42.

^d The total inlet concentration of Chloride content compounds is from AP-42, Chapter 2.4 - Municipal Solid Waste Landfills - Table 2.4-1 (AP-42, 11/98)

Methodology

PM/PM10/NOx/CO Emissions (tons/yr) = Flow Rate (scfm) x 60 (min/hr) 1 MMDSCF/1,000,000 DSCF x Methane % x Emission Factor (lbs/MMDSCF Methane) x 8760 (hr/yr) x 1 ton/2000 lbs

SO₂ Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) / 1,000,000 x 1 atm / Gas Constant (0.7032 atm-cf/lb mole-R) / Temp (68F+ 460)
 x Mole weight of SO₂ (64 lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs

NOx/CO Emissions (tons/yr) = Engine Power (hp) x Emission Factor (gram/hp-hr) x 8760 (hr/yr) x 1.1 ton/1,000,000 gram

NMOC Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) / 1,000,000 x 1 atm / Gas Constant (0.7032 atm-cf/lb mole-R) / Temp (68F+ 460)
 x Mole weight of Hexane/HCl (lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x 75% collection efficiency x (1-97% control efficiency)

HCl Emissions (tons/yr) = Flow Rate (scfm) x Emission Factor (ppmv) / 1,000,000 x 1 atm / Gas Constant (0.7032 atm-cf/lb mole-R) / Temp (68F+ 460)
 x Mole weight of Hexane/HCl (lbs/lbs mole) x 60 min/hr x 8760 hr/yr x 1 ton/2000 lbs x 75% collection efficiency x (1-93% control efficiency)

Appendix A: Emission Calculations

PM/PM10 Emissions

Four (4) Crankcases Equipped with the Engines (EG1, EG2, EG3, and EG4)

Company Name: Jay County Landfill, Inc.

Address City IN Zip: 5825 W. South, Portland, IN 47371

SSM #: 075-16124-00029

Reviewer: ERG/YC

Date: October 3, 2002

Woodworking Process Description:

The purpose of the crankcase breather vent is to remove water vapor from the crankcase in order to prevent water from collecting in the oil pan. The water vapor may contain an oil mist. The breather vent in each engine will remove the vapor s within the crankcase and dust them to a single common emission points called the crankcase breather vent.

Engine Oil Consumption:	20 gal/month/engine	(provided by the source)
Oil Gravity:	0.89	

Note: Assume that the oil mist is emitted as particulate and PM emissions equal to PM10 emissions.

1. Potential to Emit PM/PM10:

Annual PM/PM10 emissions = 20 gal/month x 0.89 x 8.31 lbs/gal x 12 month/yr x 1 ton/2000 lbs x 4 engines = **3.55 tons/yr**